with respiratory disease, particularly those who have asthma. In most instances, the precise mechanisms of diseases are unknown. Removal of the patient from his work environment is usually successful in eliminating the problem. Distressingly, a few patients continue to have moderate to severe asthma despite this change.

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Incidence of Certain Allergic Lung Diseases in California

ALLERGIC BRONCHOPULMONARY ASPERGILLOSIS (ABA) and the hypersensitivity pneumonitides (HP) encompass syndromes manifested by lung damage and immunological changes. ABA, closely but not exclusively associated with asthma, is characterized clinically by recurring pulmonary infiltrates, proximal bronchiectasis, sputum and blood eosinophilia, and the expectoration of mucus plugs containing aspergillus elements. Immunologically, there are serum elevations of both immunoglobulin G (IgG) and immunoglobulin E (IgE), and a dual skin reaction to aspergillus extracts (immediate wheal and flare followed in 4 to 9 hours by a diffuse inflammatory reaction). Specific IgE antibodies as well as precipitating antibodies of the IgG and immunoglobulin M (IgM) classes to aspergillus antigens have been shown in these patients.

A large number of occupational and avocational diseases, such as farmer's lung and pigeon breeders' disease, are now classified as HP. In the acute form, fever chills, leukocytosis (but not necessarily eosinophilia) and pulmonary infiltrates occur some 4 to 8 hours after a heavy exposure to various organic dusts, usually of fungal or animal origin. In the more insidious type—perhaps the result of a smaller but more continuous exposure—early clinical manifestations include dyspnea on moderate exertion, productive cough and weight loss. Although an x-ray film of the chest may appear normal, pulmonary function tests will indicate restrictive lung disease with hypoxemia. Precipitins to antigens from organic dusts are found in the serum.

Only sporadic cases of these diseases have been reported from the Pacific Coast area. One of the limiting factors has been the availability of suitable antigens for precipitin tests. Using a battery of ten different antigens, over 260 sera have been investigated in patients either (1) suspected of ABA or HP or (2) with asthma and chronic lung diseases. About 25 percent had positive precipitins to one or more of the test antigens. The incidence of positive reactions rose to 75 percent and 49 percent when bird fanciers' disease and ABA, respectively, were suspected. Clinical correlation of these tests led to presumptive diagnosis of 12 new cases of allergic bronchopulmonary aspergillosis, five of bird fanciers' disease, and one of farmer's lung.

Thus, the results of this relatively small sampling suggest that these allergic lung conditions are not rare in California. Improved detection will require a combination of medical acumen and availability of standardized antigens and testing methods.

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Unreliability of Cytotoxic Food Testing

THE DIAGNOSIS of clinically significant food allergy is often difficult. The workup in suspected cases may include, after careful history taking, skin testing, and elimination and provocative diets—as indicated.

Additionally, the cytotoxic food test, an *in vitro* attempt to diagnose food allergy, has been used. The test consists of simultaneous incubation of blood cells (primarily polymorphonuclear leukocytes) with the appropriate antigen and the patient's serum. Positive reactions have been described by changes in the morphology of the leukocytes and red cells and the mobility of the leukocytes in the suspension.

In a recent control study of the cytotoxic food test, 45 patients were divided into three groups:

1. A control group of 20 persons with no history of symptomatic reactions to foods.

2. Fifteen atopic patients with well documented allergic reactions—consisting of urticaria, angioedema or anaphylaxis—to certain foods.